

I/WE CLAIM

1. A clamping jaw used for gripping wire to form nails comprising:
 - a main body split partially in a longitudinal direction so as to define a gap between first and second clamping fingers, said main body including a top surface, a bottom surface, a central bore extending between the top and bottom surfaces and bisected by the gap, a recess portion defined between the first and second clamping fingers adapted to receive a removable insert, a countersunk cavity formed in the bottom surface, and a projection provided at the central bore, said projection including a first section extending from the first clamping finger and a second section extending from the second clamping finger;
 - a fastener having a shaft extending through the central bore, said shaft including a first end that extends beyond the projection leading to a second end that terminates in a head member; and
 - a clamping element positioned in the countersunk cavity, said clamping element including a recess, wherein the first end of the fastener engages the clamping element, with the fastener being adapted to wedge the recess against the projection of the countersunk cavity to draw the first and second clamping fingers toward each other, thereby causing the gap in the main body to become smaller.
2. The clamping jaw according to claim 1, wherein the projection is frusto-conical in shape and extends about the central bore in the countersunk cavity.
3. The clamping jaw according to claim 1, wherein clamping member includes a central, threaded passage receiving the fastener, said recess being formed about the threaded passage.
4. The clamping jaw according to claim 1, further comprising: a countersunk pocket formed in the top surface about the central bore, said countersunk pocket receiving the head member of the fastener.
5. The clamping jaw according to claim 1, further comprising: a removable tool insert nested in the recess portion of the main body, wherein drawing the clamping element into the countersunk cavity causes the removable tool insert to be gripped by the first and second clamping fingers.

6. The clamping jaw according to claim 1, further comprising: a stress relief extending between the first and second surfaces of the main body at a terminal end portion of the gap.
7. A clamping jaw used for gripping wire to form nails comprising:
 - a main body split partially in a longitudinal direction so as to define a gap between first and second clamping fingers, said main body including a top surface, a bottom surface, a central bore extending between the top and bottom surfaces and bisected by the gap, a recess portion defined between the first and second clamping fingers, and a countersunk cavity formed in the bottom surface having a substantially uniform cross-section;
 - a removable tool insert nested in the recess portion;
 - a projection provided at the central bore, said projection including a first section extending from the first clamping finger and a second section extending from the second clamping finger; and
 - means for clamping the insert between the first and second clamping fingers, said clamping means engaging the first and second sections of the projection to draw the first and second clamping fingers together so as to selectively retain the insert in the recess portion of the main body.
8. The clamping jaw according to claim 7, wherein the projection is constituted by a frusto-conical member extending about the central bore in the countersunk cavity.
9. The clamping jaw according to claim 8, wherein the clamping means includes a frusto-conical recess adapted to receive the frusto-conical member, wherein drawing the clamping means onto the frusto-conical member causes the first and second clamping fingers to come together.
10. The clamping jaw according to claim 7, further comprising: a stress relief extending between the first and second surfaces of the main body at a terminal end portion of the gap.
11. The clamping jaw according to claim 7, further comprising: a countersunk pocket formed in the top surface of the main body about the central bore.

12. A nail production machine comprising:

a wire feeding unit;

first and second clamping jaws for selectively gripping wire fed by the wire feeding unit during the formation of nails, each of the first and second clamping jaws including:

a main body split partially in a longitudinal direction so as to define a gap between first and second clamping fingers, said main body including a top surface, a bottom surface, a central bore extending between the top and bottom surfaces and bisected by the gap, a recess portion defined between the first and second clamping fingers adapted to receive a removable insert, a countersunk cavity formed in the bottom surface, and a projection provided at the central bore, said projection including a first section extending from the first clamping finger and a second section extending from the second clamping finger;

a fastener having a shaft extending through the central bore, said shaft including a first end that extends beyond the projection leading to a second end that terminates in a head member; and

a clamping element positioned in the countersunk cavity, said clamping element including a recess, wherein the first end of the fastener engages the clamping element, with the fastener being adapted to wedge the recess against the projection of the countersunk cavity to draw the first and second clamping fingers toward each other, thereby causing the gap in the main body to become smaller;

a replaceable insert nested in the recess portion of each of the first and second clamping jaws and gripped by the first and second clamping fingers; and

at least one cutter die for cutting nail sections from wire fed from the wire feeding unit and gripped by the first and second clamping jaws.

13. The nail production machine according to claim 12, wherein the projection of each of the first and second clamping jaws is frusto-conical in shape and extends about the central bore in the countersunk cavity.

14. The nail production machine according to claim 12, wherein each of the first and second clamping members includes a central, threaded passage receiving the fastener, said recess being formed about the threaded passage.

15. A method of clamping a removable tool insert in a tool holder including a main body which is partially split in a longitudinal direction so as to define a gap forming first and second clamping fingers comprising:

positioning the removable insert into a recess formed between the first and second clamping fingers; and

drawing a clamping member into a countersunk cavity formed in the main body to cause the clamping member to wedge against projection portions extending from each of the first and second clamping fingers in order to reduce the gap, thereby clamping the removable insert between the first and second finger members.

16. The method according to claim 15, wherein the clamping member is drawn into the countersunk cavity by tightening a fastener extending through the main body and into the clamping member.

17. The method according to claim 16, wherein tightening of the fastener causes the fastener to thread into a passage formed in the clamping member to draw the clamping member against the projection portions.

18. The method according to claim 17, wherein tightening of the fastener causes a head of the fastener to be positioned in a countersunk pocket formed in a top surface of the main body.

19. The method according to claim 15, wherein the clamping member is drawn against the projection portions within the countersunk cavity formed in the main body.

20. The method according to claim 19, wherein the clamping member is wedged against the projection portions by causing a tapered recess formed in the clamping member to ride along tapered surfaces of the projection portions as the clamping member is draw into the countersunk cavity.